USER'S GUIDE

AudioGate Ver. 1.5

KORG

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Introduction

AudioGate is an audio file conversion application that supports 1-bit audio. Audio files created by KORG's MR-2000S, MR-1000 or MR-1 audio recorders can be converted and exported in the format that you select. An individual file may be divided into smaller, separate files; and smaller files can be joined end to end into a larger single file. Editing operations such as Gain Adjustment and Fade In /Fade Out are also supported.

Supported formats

AudioGate can read, convert and export the following audio file formats:

File format		Number of channels	Sample rate	Bit depth
WAV	(extension: .wav)	1ch(mono) 2ch(stereo)	44.1 kHz 48 kHz 88.2 kHz 96 kHz 176.4 kHz 192 kHz	16 bit 24 bit 32 bit(float)*1
BWF	(extension: .wav)			
AIFF	(extension: .aif/.aiff)			
DSDIFF	(extension: .dff)		2.8224 MHz 5.6448 MHz	1-bit
DSF	(extension: .dsf)			
WSD	(extension: .wsd)			

*1 WAV/BWF only

In some cases, it may not be possible to successfully read files that were not created by the MR-2000S, the MR-1000, the MR-1, or AudioGate.

Audio files of the following formats are supported for reading only.

File format		Number of channels	Sample rate	Bit depth	Note
MP3	(extension: .mp3)	1ch(mono) 2ch(stereo)	44.1 kHz 48 kHz	80...320 kbps, VBR	
AAC	(extension: .m4a)			96...320 kbps, VBR	Supported if QuickTime7 is installed
Apple Lossless (ALAC)				VBR	
WMA	(extension: .wma)			32...192 kbps, VBR	Windows only

Audio files protected by DMR (Digital Rights Management) cannot be input.

Items on the screen

Audio format conversion and export

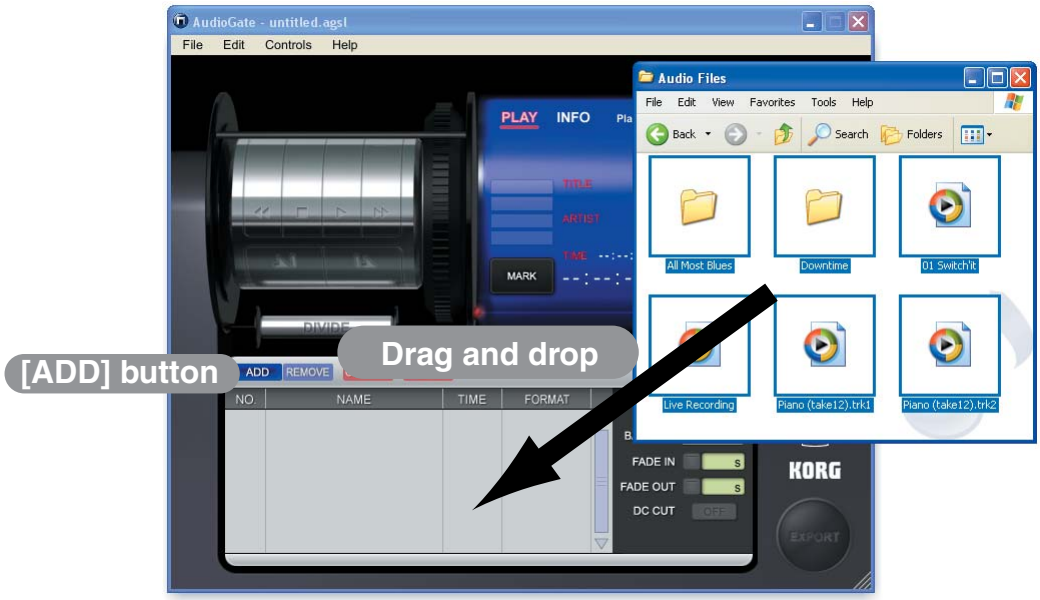
AudioGate can convert an audio file on your computer to your desired format and export it.
MR projects created on the MR-2000S, MR-1000, or MR-1 can also be imported directly and converted into the selected format.
In AudioGate, the term "song" refers to each item of audio data in the song list.

note By importing an MR project, you can load marks or automatically join divided audio files to handle them as a single song.

When working with MR project files that were recorded by the MR-2000S, MR-1000, or MR-1, you'll need to copy them onto the hard disk of your computer.

1. **Drag and drop the desired MR project file (or audio file) into the songlist.**
   Alternatively, you can click the [ADD] button and select the .prj file in the MR project file, or an audio file.

The files in the list will be imported, and information such as the playback time and the format will be displayed.

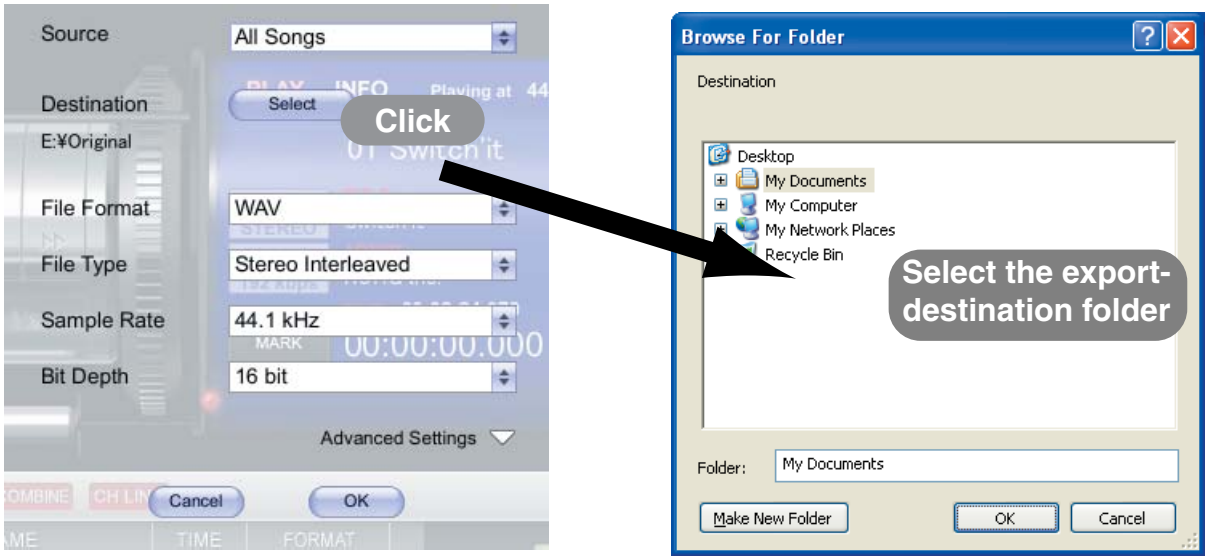


2. Click the [EXPORT] button.

The export file setting screen will appear.

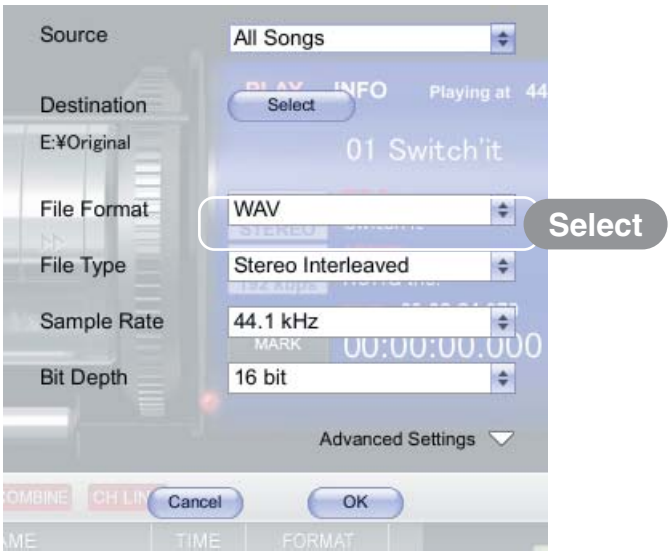
3. Set the conversion source. Choose [All Songs] to export all songs in the songlist, or choose [Selected Songs] to export only selected songs in the list.

4. **In the "Destination" area, click the [Select] button and choose the export-destination folder.**



5. **Specify the desired output file format.**

If you specify "AIFF" as the format, the MR-1000 or MR-1 will be unable to play back the file.



6. **Specify the desired output file type.**

Mono / Dual Mono

A monaural song will be exported as a monaural file, and a stereo song will be exported as a dual mono file. This is especially convenient if the file is going to be brought into in a DAW after export.

Files of this format cannot be played back by the MR-2000S, MR-1000, or MR-1.

Stereo Interleaved:

A channel-interleaved stereo file will be exported. In the case of a monaural song, the L channel and R channel will contain the same data, If you want to play back the file on the MR-2000S, MR-1000, or MR-1, copy it into the AUDIO folder.

MR Project:

An MR project folder containing a .prj file and audio file will be exported. This is useful when exporting very large audio data (exceeding the 4 GB limit of FAT32).

Marks edited by AudioGate can be imbedded into the MR project. When playing back on the MR-2000S, MR-1000, or MR-1, you can obtain gapless playback by copying the marks to the appropriate location in the MR_PROJ folder.

7. Specify the desired sample rate and bit depth for the exported file.

If the sample rate is set to "5.6 MHz," the MR-1 will be unable to play back the file.

If the bit depth is set to "32 bit (float)" or if the file format is set to "AIFF", the MR-1000 and MR-1 will be unable to play back the file. The MR-2000S, MR-1000 and MR-1 will also be unable to play back the file if you export a "16 bit" file at a sampling frequency of "88.2 kHz" or higher.

note You can change the detail settings of the conversion algorithm by selecting [Advanced Settings]. For more information, please refer to "Advanced settings" (page 8).

8. Click the [OK] button.

The "Converting to ..." dialog box will appear in the upper right side of the info viewer, and the file conversion and export process will begin.

note During the export process, you can stop the processing by clicking the [EXPORT] button once again.

1-bit audio files may contain louder signals than PCM. When converting 1-bit audio files to PCM files, you might need to set GAIN settings down by approximately – 3.0 dB to avoid clipping (see page 15).

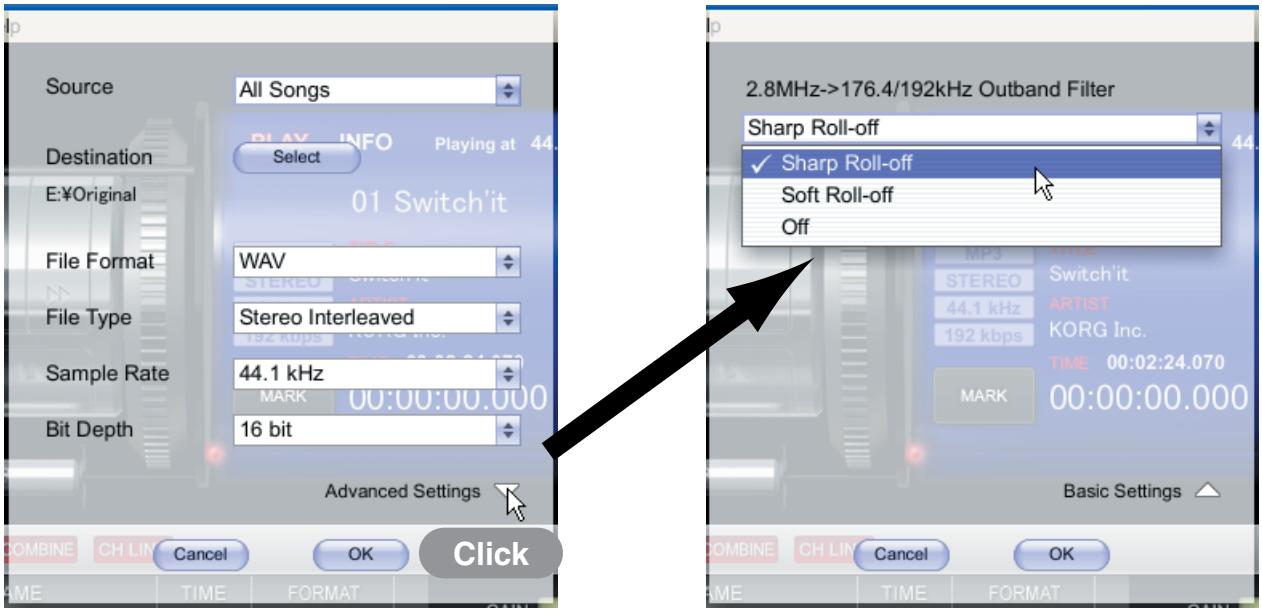
When exporting a song as a 1-bit audio file, a minimal amount of silence may be added to the end of the exported file.

note If the input file and the output file have the same sample rates, and if the GAIN and DC CUT settings are kept to default (see page 15), AudioGate may switch to "direct exporting mode" where unnecessary recalculation is reduced. The level meter will be fixed to 0dB when AudioGate is running in "direct exporting mode."

9. **When the process is finished, a dialog box will appear indicating "Export completed" . Click the [OK] button.**

Advanced settings

You can change the detail settings of the conversion algorithm by selecting [Advanced Settings] before exporting.



2.8 MHz->176.4/192 kHz Outband Filter

Sets the additional filter for the conversion from 1 bit/2.8 MHz songs to 176.4 kHz or 192 kHz PCM files.

Sharp Roll-off	Applies a low-pass filter with sharp roll-off (– 3 dB @42 kHz).
Soft Roll-off	Applies a low-pass filter with soft roll-off (– 3 dB @50 kHz).
Off	The additional filter will not be applied.

Song Playback

AudioGate will play back songs that are imported into the songlist. This provides a useful way to check the content of a 1-bit audio file, or to specify editing points.

The song playback functionality provided by AudioGate is a convenience feature that uses a high-speed filter. In order to experience the full sound quality of 1-bit audio, please use a device that supports 1-bit audio, such as the MR-2000S, MR-1000 or MR-1.

note In AudioGate, the song that's playing (or paused for playback) is called the "current song." The current song is indicated by a speaker icon in the songlist, and the info viewer will display information about that song. The current location in the current song is called the "current position". The current position can be seen in the time display.

Playing back a song

Double-click a song in the songlist to make it the current song. Playback will begin automatically.

note If you experience problems with playback, for example if there is no sound or if there are frequent clicks or pops in the playback, please refer to "Audio device settings" (page 12).

Contents of the info viewer display

The info viewer shows information about the current song.

Item	Method
Sample rate of the audio device	Indicates the sample rate of the audio device. The current song is converted to this sample rate in realtime as it plays.
Song name	Indicates the name of the current song.
Text data	Indicates the title and artist name of the current song.
Format	Indicates the file format, number of channels, sample rate, and bit depth of the current song. When playing MP3/AAC/Apple lossless (ALAC)/WMA files, the "bit depth" icon will be the "bit rate" indication (e.g., 128 kbps).
[MARK] button	Click the [MARK] button, and the mark editing window will open.
Time information	Indicates the playback time and the current playback location of the current song.

Controllers you can use

You can use the following controllers to control the playback.

Contoroller name	Action
[Play/Pause] button	Switches the current song between playback and pause
[Stop] button	Stops playback of the current song.
[FF] button	Changes the current position to the next mark location. If there is no next mark, the current position will change to the next song in the song list. By holding down this button you can fast-forward the playback point.
[REW] button	Changes the current position to the previous mark location. If there is no previous mark, you will move to the beginning of the song. By holding down this button you can rewind the playback point.
[To] button	If you click this while paused, a two-second region ending at the current position will play.
[From] button	If you click this while paused, a two-second region starting from the current position will play.
Time wheel	You can drag this upward/downward to make fine adjustments to the current position.
Time slider	This graphically indicates the current position. You can change the playback point by dragging this to left or right.

Continuous Playback function

If you turn this on by selecting the [Controls]->[Continuous Playback] option, continuous playback of the song list will be enabled.

Continuous Playback	When song playback reaches the end of the song
Off	The position will return to the beginning of the current song, and playback will stop.
On (selected)	Playback will continue with the next song in the song list. If there is no next song, the position will return to the first song, and playback will stop.

Direct Locate function

This allows you to specify the current position directly from the keyboard.

1. **While a song is playing or stopped, click the counter in the info view.**

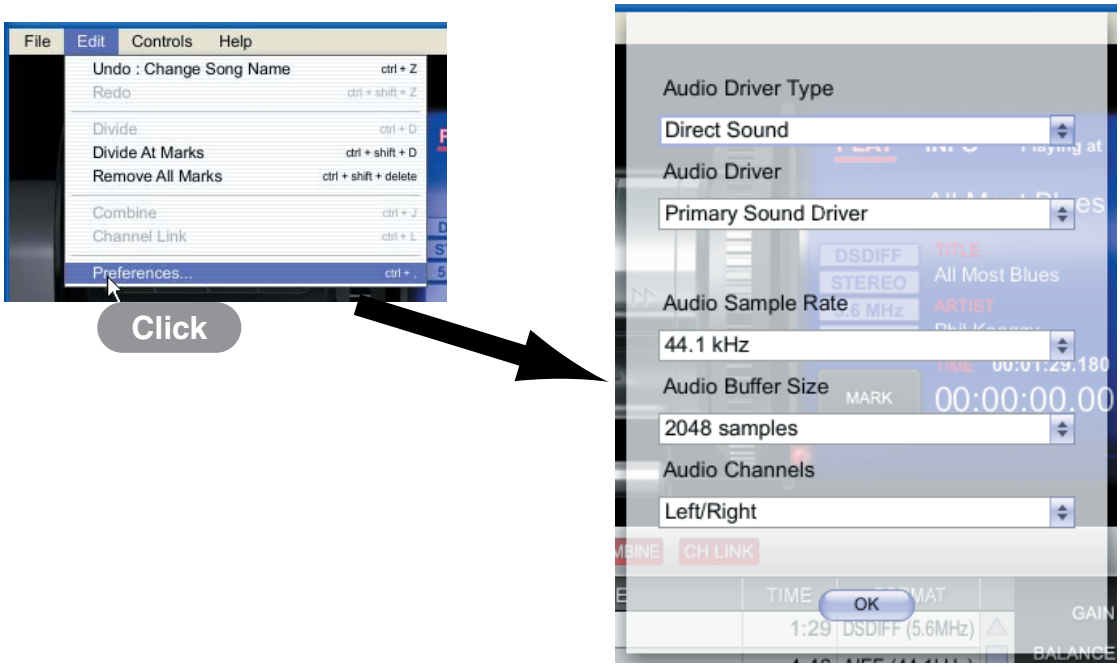
2. **The counter will become an editable field. From the keyboard, enter the new counter position (e.g., 2:30).**
   You may omit the colon (:), and simply enter "230" (interpreted as "2:30") or "1204" (interpreted as "12:04").

Note that the current position has changed.

Audio device settings

From the menu, choose [Edit]-[Preferences...] (Mac: [AudioGate]-[Preferences...]) to access the audio device settings. If the song does not play correctly, please check these settings to make sure that each item is configured properly.

note Fast CPU is required for stable playback of 1-bit audio files. If there are frequent clicks or pops in the playback, you may improve the performance by setting the audio sample rate lower and/or by setting the audio buffer size larger.



Song editing

AudioGate lets you divide or combine songs in the songlist. This allows you to export selected regions from an audio file, or combine multiple consecutively-recorded files into a single file before you export it. You can also edit the gain, fade, and DC cut settings of each song, and edit text data such as the title and artist name.

Basic operation in the songlist

Operation	Method
Add a song	Click the [ADD] button and select a file, or drag and drop an audio file from your computer into the songlist.
Select a song	Click the song. To select multiple songs, hold down the Ctrl key (Mac: Command key) and click. The currently selected song is displayed in focus (highlighted).
Remove a song	Select the song, and click the [REMOVE] button.
Rearrange the songs	Drag the selected song up or down in the list to move it.

Saving a songlist

From the menu, choose [File]-[Save Songlist As...] and specify a file name and a save-location. Songlist files will have an extension of ".agsl".

Opening a songlist

From the menu, choose [File]-[Open Songlist] and specify a songlist file that you saved.

note If the current songlist has not yet been saved, a message of "Save the current songlist before opening?" will appear. Choose [Save] if you want to save the current songlist, or [Don't Save] if you don't want to save it.

note If an audio file cannot be found because it has been moved or deleted, the song name is displayed in red. You can't play or export a song that is displayed in red.

note Even if AudioGate is not running, you can automatically start up AudioGate and load a songlist by drag-and-dropping the desired songlist file (.agsl) onto the AudioGate icon.

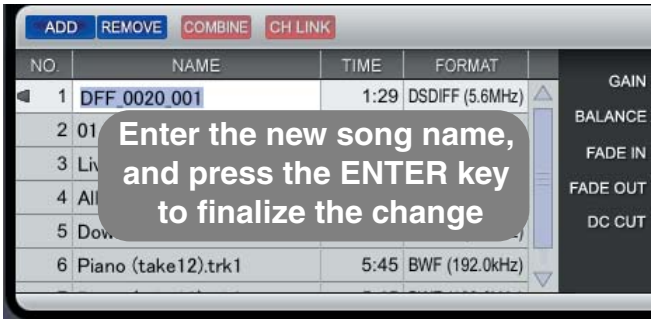
Renaming a song

When you click the song name in the songlist (or double-click the song name in the info viewer), the text will become editable. After you've finished editing the name, use the Enter key to finalize the change.

note The song name is used as the name of the output file when exporting.

You can't rename a song using the same name as another song in the list.

It is possible to enter Japanese (multi-byte text) as the song name, but you should use English alphanumeric characters if you intend to export as an MR project.



Editing text data

You can edit the text data of the current song (the song title and the artist name). When a file is exported, this information is embedded in the header of the exported file.

It is possible to enter Japanese (multi-byte text) as text information, but you should use English alphanumeric characters if you intend to export in a format other than AIFF or DSF. Due to limitations in the file format, characters other than English alphanumerics will be ignored when exporting.

1. **Double-click a song in the songlist.**

   That song will become the current song, and the song information will appear in the info viewer.

2. **In the info viewer, click the Title field to make the song title editable. When you're finished editing, press the Enter key to finalize the change.**

3. **In the same way, click the Artist field and edit the artist name.**

   If you click the [INFO] tab in the info viewer, you will also be able to edit the "Genre" (musical style), "Location" (recording location), "RecDate" (date of recording), and "RecTime" (time of recording) information, but depending on the format of the exported file, this information may not be embedded in the header.

Editing the song settings

Various settings for the currently selected song are shown at the right of the songlist. You can edit these settings by double-clicking them and entering a value (or clicking a button). These settings are reflected when you play back or export the song.

Item	Method
GAIN	Specify the volume level of the song in a range of – 24.0 dB...+ 24.0 dB. Adjust this so that the clip indicator does not light during playback or during exporting.
BALANCE	This adjusts the left/right volume balance of the song within a range of L100...C...R100. However, the balance of a monaural song is fixed at C (center), and cannot be changed.
FADE IN	This specifies the shape of the envelope used for fade-in, and the time duration (0.0 seconds--10.0 seconds) over which the fade-in is completed.
FADE OUT	This specifies the shape of the envelope used for fade-out, and the time duration (0.0 seconds--10.0 seconds) over which the fade-out is completed.
DC CUT	Normally you will leave this "OFF" (disabled). If the song file contains a DC offset, you can turn this "ON" to remove the offset. While often inaudible, a DC offset can reduce the available headroom before clipping, and can affect the sound quality in other ways.

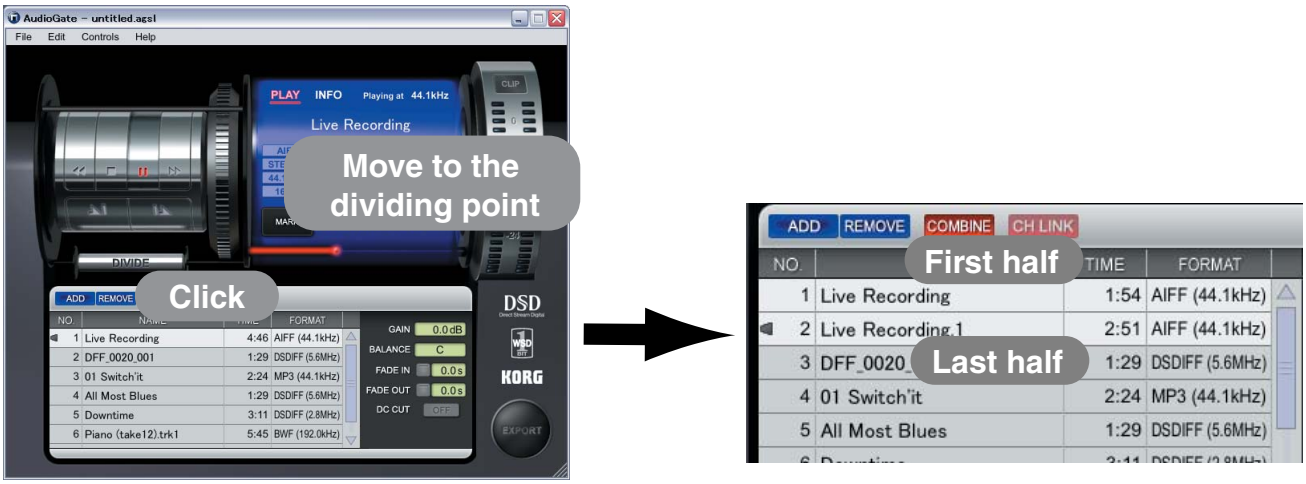
Dividing a song

You can divide the current song into two at the currently stopped point.

1. **Use the song playback functions to move to the point where you want to divide the song.**

2. **Make sure that the playback is paused, and click the [DIVIDE] button.**
   You will see that the song has been divided in the songlist.

note Text data and song settings will generally be carried over into both songs following the Divide operation.



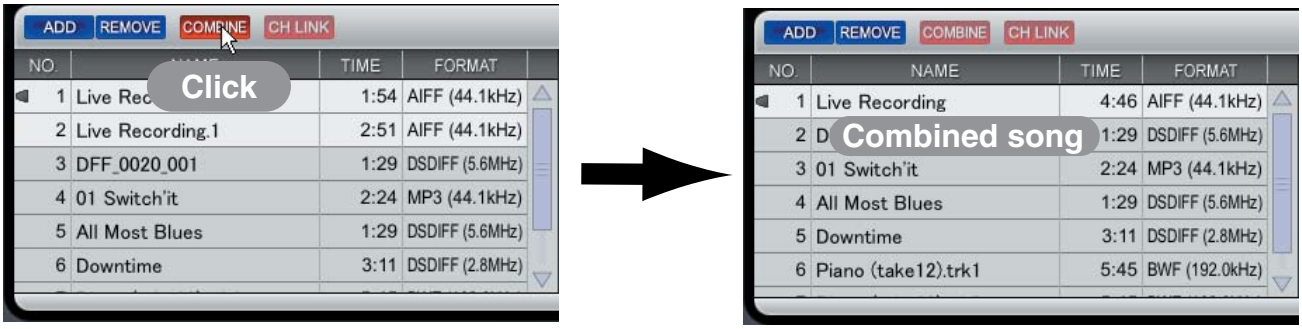
Combining songs

Combining songs splices the end of one song directly to the beginning of another song. Here's how you can combine two or more songs into a single song.

1. **In the songlist, click a song to select it.**

2. **Hold down the Ctrl key (Mac: Command key), and click other songs to select them.**

3. **Click the [COMBINE] button.**
   You will see that the songs have been combined in the songlist.



- You can use the "Combine" function to join together recordings that were not originally seperated by the MR recorder's automatic split function, but some slight noise may be introduced at the point where the songs are joined.
- You can't combine songs of differing formats.
- You cannot combine songs of MP3, AAC, Apple lossless (ALAC), and WMA formats with each other.

note Text data and song settings will generally be taken from the top song in the list.

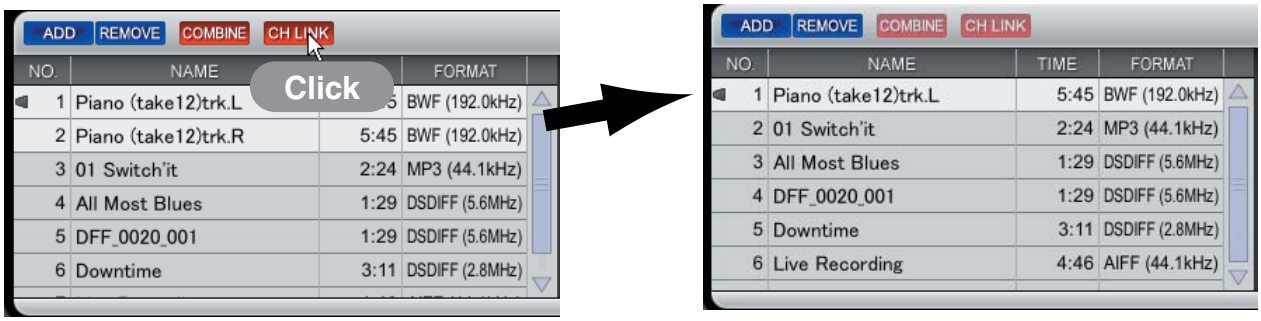
Channel Link function

This allows you to handle two monaural songs as a single stereo song. Normally you will use this to link two songs of the same length.

1. **Click one of the songs in the song list to select it.**
2. **Hold down the [Ctrl] key (Mac: [Command] key) and click the other song so that both songs are selected.**
3. **Click the [CH LINK] button. Verify that the songs are linked in the song list.**

- You can't link songs of different formats, or songs that are in MP3, AAC, Apple lossless (ALAC), or WMA formats.
- If you link songs that are of differing lengths, the resulting length will match the longer song.

note Text data and song settings will generally be taken from the upper song in the list.



Mark function

Importing marks

AudioGate can load the following marks.

- Marks included in an MR project
- Marks included in the cue-points chunk of a WAV/BWF file
- Marks (track start and index) included in the marker chunk of a DSDIFF file

Exporting marks

AudioGate can embed marks when exporting the following file formats.

- MR project format
- WAV or BWF files
- DSDIFF files

Editing marks

Click the mark button in the info view window, and the mark editing window will open.
In the mark editing window you can see mark icons shown above the time slider at mark locations.

Operation	Method
Selecting a mark	Click the mark icon. The mark icon will be selected, and the mark number and mark location will be displayed in the mark box.
Adding a mark	Click the [ADD] button to add a mark at the current position. You can't add two marks at the same position.
Removing a mark	Select the mark that you want to remove, and click the [REMOVE] button.
Editing the location of a mark	Select the mark whose location you want to edit, and click the displayed mark time. The time indication will become editable. Use the keyboard to enter the desired time, and press the Enter key.
Removing all marks from the current song	Choose the menu item [Edit]->[Remove All Marks].
Dividing the song at mark locations	Choose the menu item [Edit]->[Divide At Marks].

Moving to a mark location

Operation	Method
Moving to the next mark	Click the "FF" button. You will move to the "next mark" relative to the current position.
Moving to the previous mark	Click the "REW" button. You will move to the "previous mark" relative to the current position.
Moving to a specified mark	Double-click a mark icon. Click the "▼," at the right edge of the mark box, and choose a mark from the list.

Other convenient functions

Reverting an edit (Undo)

By choosing the menu command [Edit]-[Undo], you can revert to the state prior to executing the most recent editing operation.

Re-executing the edit (Redo)

By choosing the menu command [Edit]-[Redo], you can re-execute the operation that was reverted by the Undo command.

List of shortcuts

Function	Windows	Mac
Open a songlist	Ctrl + Shift + O	Command + Shift + O
Save the songlist	Ctrl + S	Command + S
Save the songlist as...	Ctrl + Shift + S	Command + Shift + S
Add a song	Ctrl + O	Command + O
Remove songs	Delete	Delete
Switch the info viewer display	Ctrl + I	Command + I
Export	Ctrl + Shift + E	Command + Shift + E
Exit AudioGate	Ctrl + Q	Command + Q
Undo the edit	Ctrl + Z	Command + Z
Redo the edit	Ctrl + Shift + Z	Command + Shift + Z
Cut text	Ctrl + X	Command + X
Copy text	Ctrl + C	Command + C
Paste text	Ctrl + V	Command + V
Divide the song	Ctrl + D	Command + D
Divide a song at mark locations	Ctrl + Shift + D	Command + Shift + D
Remove all marks	Ctrl + Shift + Delete	Command + Shift + Delete
Select all marks	Ctrl + Shift + A	Command + Shift + A
Combine songs	Ctrl + J	Command + J
Channel Link	Ctrl + L	Command + L
Select song above	↑	↑
Select song below	↓	↓
Select all songs	Ctrl + A	Command + A
Audio output settings	Ctrl + ,	Command + ,
Play selected song	Enter	Enter
Play/pause the song	Space	Space
When paused, play from current position (From play)	F	F
When paused, play to current position (To play)	T	T
While paused, move current position 0.001 second forward	Shift + →	Shift + →
While paused, move current position 0.001 second backward	Shift + ←	Shift + ←
While paused, move current position 0.05 second forward	→	→
While paused, move current position 0.05 second backward	←	←

Function	Windows	Mac
While paused, move current position 1 second forward	Alt + →	Option + →
While paused, move current position 1 second backward	Alt + ←	Option + ←
While playing, move current position forward (FF play)	→(Hold down)	→(Hold down)
While playing, move current position backward (REW play)	←(Hold down)	←(Hold down)
Move to next mark	Ctrl + Shift + →	Command + Shift + →
Move to previous mark	Ctrl + Shift + ←	Command + Shift + ←
Edit current position (direct locate)	G	G
Move to the next song	Ctrl + →	Command + →
Move to the previous song	Ctrl + ←	Command + ←